

結果：



The image shows a screenshot of an R console window. The window has a title bar with 'Console' and 'Terminal x' tabs. The console output shows the execution of a script, with the following lines of code and their corresponding results:

```
> source('C:/Users/A5254135/Desktop/PccuHW/三下/R語言與資料分析/A6409001_邱鄭涵_R6.R')
Fibonacci(9): 34
Fibonacci_recursive(9): 34

Fibonacci(58): 591286729879
|
```

程式碼：

```
1 #-----斐波那契數列(遞迴操作)
2
3 Fibonacci_recursive <- function(x)
4 {
5
6   if (x <= 2) return (1)
7
8   else return (Fibonacci_recursive(x-2) + Fibonacci_recursive(x-1))
9
10 }
11
12 #-----斐波那契數列(非遞迴操作)
13
14 Fibonacci <- function(n)
15 {
16
17   f1 <- 1
18   f2 <- 1
19
20   if(n <= 2) return(f2)
21
22   else
23   {
24     for(i in c(3 : n))
25     {
26       temp <- f2
27       f2 <- f1 + f2
28       f1 <- temp
29     }
30     return(f2)
31   }
32 }
33
34 #-----驗證結果_斐波那契數列(遞迴、非遞迴操作)
35
36 cat("Fibonacci(9): ", Fibonacci(9), '\n')
37 cat("Fibonacci_recursive(9): ", Fibonacci_recursive(9), "\n\n")
38
39 cat("Fibonacci(58): ", Fibonacci(58), '\n')
40 cat("Fibonacci_recursive(42): ", Fibonacci_recursive(42))
41
42
```